

Notice of Allowability

Application No.

09/941,732

Examiner

Matthew W. Genack

Applicant(s)

HARA, KENTARO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5 September 2006.
2. ☒ The allowed claim(s) is/are 1,2 and 7-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DUC M. NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-2 and 7-12 are allowed.

Regarding Claims 1 and 2, Trompower, U.S. Patent No. 6,006,096, discloses a network cellular communication system wherein a mobile terminal communicates with a plurality of base stations, each base station with one or more omni-directional and/or directional antennas, said base stations connected to a host computer via a backbone, and wherein said base stations change the power level of signals transmitted to said mobile terminal in order to determine the location of said mobile terminal (Abstract, Column 2 Line 66 to Column 3 Line 14, Column 10 Lines 29-40, Figs. 1-4). Specifically, the base stations sweep 360 degrees (either mechanically or electrically with beam forming methods) to determine a cell that the mobile terminal is in, and reduce the transmission powers and receiver sensitivities in order to reduce the sizes of their respective coverage areas until the mobile terminal's location is determined to the best possible accuracy (Column 9 Line 43 to Column 10 Line 28, Fig. 2). The mobile terminal indicates that it has received signals from respective antennae of the various base stations by transmitting signals back to them, thereby providing Boolean reception data to the host computer for use in its determination of the mobile terminal's location (Figs. 8-10).

Trompower does not expressly disclose the determination of the position of the mobile terminal as viewed in a direction in which paired antennae are arrayed.

Bachhuber *et. al.*, U.S. Patent No. 6,087,987, discloses a radio system that allows the electronic key for a motor vehicle to be located (Abstract, Column 1 Line 66 to Column 2 Line 2). The electronic key is portable (Column 4 Lines 6-15, Figs. 1-2). The motor vehicle contains a set of transmitter/receivers that are coupled to a controller and that are stationary with respect to said motor vehicle and that engage in wireless communication with the electronic key (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1). The motor vehicle contains four antennae, coupled to respective transmitter/receivers, located in corners (Column 3 Lines 56-57, Column 6 Lines 20-23, Fig. 3). The transmitter/receivers transmit search signals that are received by the electronic key, and that causes said electronic key to transmit an identification signal back to the transmitter/receiver (Column 4 Lines 46-59); additionally, the electronic key can measure the received power levels of signals (such as search signals) sent from the transmitter/receivers and convert these measurements into location information (Column 5 Lines 15-20), and transmit this information back to the transmitter/receivers and thereby the controller (Column 5 Lines 31-34). Bachhuber *et. al.* discloses that the antennas have predetermined directional characteristics that are used by the controller in the computation of the location of the electronic key relative to these antennas (and thus, relative to the baseline vectors determined by the positions of the antennae pairs) (Column 6 Lines 13-18).

Neither Trompower nor Bachhuber *et. al.* expressly discloses the practice of varying the setting between transmission output powers of antennae, affixed to a

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stationary device, among a plurality of relationships (one antenna's output power is greater than, equal to, or less than the output power of another antenna), or the signals from each antenna contain both an antenna identification code and a condition code. No reference was found that discloses this feature. Therefore, Claims 1 and 2 are allowable over the prior art.

Claims 7-12 depend on Claim 2, and are therefore also allowable over the prior art.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- In Claim 1, Line 2, delete the words "that may be carried by a user"
- In Claim 2, Line 2, delete the words "that may be carried by a user"
- Renumber Claim 7 as Claim 3
- Renumber Claim 8 as Claim 4
- Renumber Claim 9 as Claim 5
- Renumber Claim 10 as Claim 6
- Renumber Claim 11 as Claim 7
- Renumber Claim 12 as Claim 8

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Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Genack whose telephone number is 571-272-7541. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew Genack

Examiner

TC-2600, Division 2617

Matthew Genack

22 December 2006


DUC M. NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600